Ex d Solenoid Valve
Type 3962

Fig. 1 · Type 3962-9

Mounting and Operating Instructions

EB 3962 EN

Edition September 2009

Contents

1 Mounting....4
1.1 Wall mounting....4
1.2 Mounting on rotary actuators with NAMUR interface acc. to VDI/VDE 3845....4
1.3 Mounting on linear actuators with NAMUR rib acc. to IEC 60534-6-1 using adapter plates....5
1.4 Mounting on linear actuators using CrNiMo pipe fittings....5
2 Pneumatic connections....6
2.1 General....6
2.2 Connecting line....6
2.3 Operating medium for the booster valve....6
2.4 Auxiliary air for the pilot valve....6
2.5 Converting to external auxiliary air routing through connection 9....7
2.5.1 Type 3962-9XXX14....7
2.5.2 Type 3962-9XXX14....7
3 Electrical connections....9
3.1 Cable entries....9
4 Certificates....12

General safety instructions

- *The solenoid valves are to be assembled, started up or operated only by trained and experienced personnel familiar with the product. According to these mounting and operating instructions, trained personnel is referred to as individuals who are able to judge the work they are assigned to and recognize possible dangers due to their specialized training, their knowledge and experience as well as their knowledge of the applicable standards.*
- *Proper shipping and storage are assumed.*
- *Explosion-protected solenoid valve versions are to be operated only by personnel who has undergone special training or instructions or who is authorized to work on explosion-protected devices in hazardous areas. For technical data, order specifications, spare parts and accessories refer to Data Sheet T 3962.*
- *Make sure the maximum permissible supply pressure is not exceeded. If necessary, reduce the supply pressure using a suitable supply pressure regulator.*
- *The solenoid valves can be installed in any desired position. Make sure the filter in the lid and the cable entries point vertically down. If this mounting position is not possible, install the solenoid valves with the filter and cable entries in horizontal position.*

Important!

- *For installation and maintenance work on the solenoid valves, make sure the relevant plant section has been depressurized and, depending on the process medium, drained as well. Due to the high surface resistance, avoid electrostatic charging when mounting or servicing the solenoid valves in hazardous areas. Do not loosen the enameled screws on the housing.*
- *The solenoid valves can be mounted on rotary actuators, linear actuators or control valves with a NAMUR rib using mounting kits. Observe the associated mounting instructions.*

1 Mounting

1.1 Wall mounting

Types 3962-9XXX13 and 3962-9XXX14

The solenoid valves can be mounted using the through holes and screws.

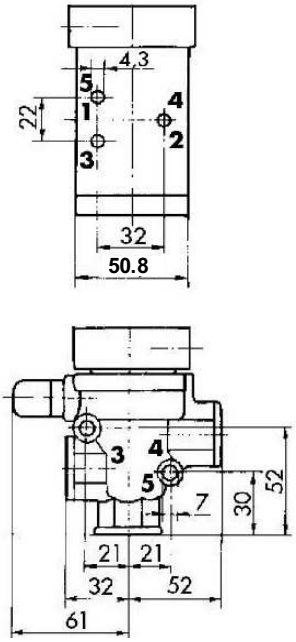


Fig. 2 · Booster valve without solenoid valve head (dimensions in mm)

1.2 Mounting on rotary actuators with NAMUR interface acc. to VDI/VDE 3845

Type 3962-9XXX0

The solenoid valves can be mounted on rotary actuators with NAMUR interface using the following adapter plates (Fig. 2):

– **1400-9741** for ¼" or
– **1400-9743** for ½".

The adapter plates are not included in the scope of delivery.

Before mounting, check that the two O-rings are properly positioned. Use the grub screw to adjust the direction of action on the connecting flange of the rotary actuator. Use two screws for attachment.

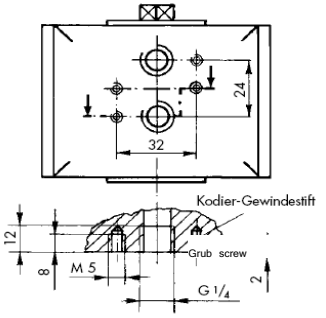


Fig. 3 · ¼" NAMUR interface (dimesions in mm)

1.3 Mounting on linear actuators with NAMUR rib acc. to IEC 60534-6-1 using adapter plates

Type 3962-9XX00

The solenoid valves can be mounted on linear actuators with NAMUR rib using adapter plates (Fig. 4). When additionally mounting positioners or limit switches on linear actuators in DN 50, an additional bracket is required (order no. 0320-1416).

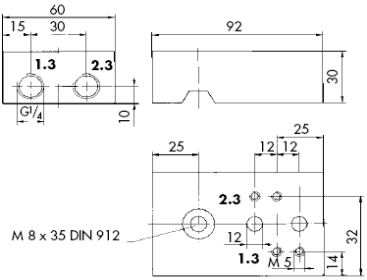


Fig 4 · Adapter plate with NAMUR rib (dimensions in mm)

1.4 Mounting on linear actuators using CrNiMo pipe fittings

Types 3962-9XX0130 and 3962-9XX0142

The solenoid valves can be mounted on linear actuators (e.g. SAMSON Type 3271 or Type 3277) using CrNiMo pipe fittings (Fig. 5). For mounting instructions on the SAMSON actuators, refer to Mounting and Operating Instructions EB 8310 EN and EB 8311 EN.

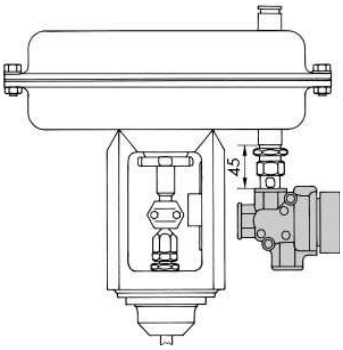


Fig. 5 · Mounting on linear actuators using CrNiMo pipe fittings

Actuator size	Connection	Order no.
1400 cm²	G ¾ or G ½	1400-6736
2100 cm²	G 1 or G ½	1400-6737
2800 cm²		

2 Pneumatic connections

2.1 General

Make sure the connecting lines and screw fittings are routed and installed properly. Check them for leaks or damage at regular intervals and replace or repair them, if necessary. Before starting any repair work, depressurize the pressure from the connecting lines to be opened.

Depending on the solenoid valve version, the pneumatic connections are established using either G ¼/¼ NPT or G ½/½ NPT threaded bores. Install filters or other suitable accessories to prevent water or dirt from getting inside the housing through the exhaust air connections.

Note! *The K_{VS} coefficient of an upstream supply pressure regulator must be at least 1.6 times higher than the K_{VS} coefficient of the solenoid valve.*

2.2 Connecting line

Refer to the following table for the minimum required pipe sizes for the connecting lines:

Nominal size (connection length ≤ 2 m)			
K_{VS}	1.4	4.3	–
Connection			
Pressure	1 and 3	4	9
≥ 1.4 bar	≥ DN 8	≥ DN 10	≥ DN 4
≥ 2.5 bar	≥ DN 6	≥ DN 8	
≥ 6 bar	≥ DN 4	≥ DN 6	

Note! *Use a larger nominal size for a connection length of more than 2 m.*

2.3 Operating medium for the booster valve

With internal auxiliary air routing:
Instrument air free of corrosive contents or nitrogen at 1.4 to 8 bar.

With external auxiliary air routing through connection 9:
Instrument air free of corrosive contents, oil or non-corrosive gases at 0 to 10 bar with K_{VS} coefficients between 1.4 and 4.3, supply air fed through connection 4.

2.4 Auxiliary air for the pilot valve

Instrument air free of corrosive contents at 1.4 to 8 bar.

Compressed air quality acc. to DIN ISO 8573-1		
Particle size and quantity	Pressure dew point	Oil contents
Class 4	Class 3	Class 3
≤ 5 µm and 1000/m³	–20 °C or at least 10 K below the lowest ambient temperature to be expected	≤ 1 mg/m³

Note on using nitrogen
If the solenoid valves are mounted in closed, non-ventilated rooms, make sure the pilot and booster valves' exhaust air is collected in a manifold line and routed to the atmosphere.

2.5 Converting to external auxiliary air routing through connection 9

If the solenoid valve is to be used to switch the output signal (0 to 8 bar) of a positioner, route the auxiliary air externally through connection 9.

2.5.1 Type 3962-9XXX14

If not specified otherwise, the solenoid valves' auxiliary air is routed internally through connection 4. To convert to external routing through connection 9, proceed as follows (Fig. 6):

1. Remove the cap screw. Remove the plate (1) and reversible seal (2) from the connecting plate.
2. Rotate the reversible seal (2) by 90°. Position the seal such that its tongue rests in the plate cut-out (9).
3. Fasten the plate (1) and reversible seal (2) to the connecting plate.

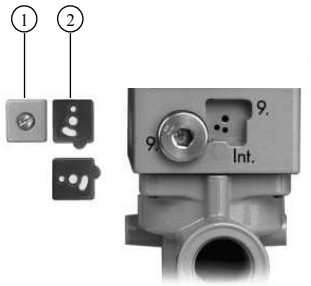


Fig. 6 · Reversible seal, booster valve

2.5.2 Type 3962-9XXX14

Remove the two hexagon socket head screws (Fig. 7) and the red solenoid valve head. Make sure the two black O-rings on the CNOMO interface are not damaged (Fig. 8).

Fig. 7 · Type 3962-9XXX14 Solenoid Valve

Remove the two hexagon socket head screws (Fig. 8). Carefully remove the CNOMO interface.

Fig. 8 · CNOMO interface with booster valve

Make sure the seals on the booster valve and the CNOMO interface are not damaged.

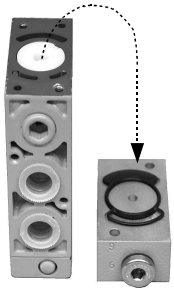


Fig. 9 · CNOMO- interface and booster valve

Internal auxiliary air routing:
Make sure the marked hole is not closed by the black reversible seal (Fig. 10, left).

External auxiliary air routing:
Make sure the marked hole is covered by the black reversible seal (Fig. 10, right).

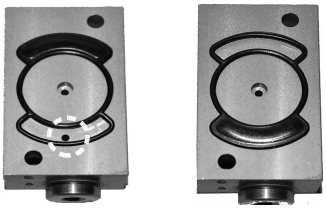


Fig. 10 CNOMO interface; position of reversible seal for internal (left) and external (right) routing of the auxiliary air

Carefully place the CNOMO interface onto the booster valve. Make sure all seals are properly positioned on the booster valve. If one seal is missing, replace the entire Type 3962 Solenoid Valve.

Mounting direction:
Make sure connection 9 of the CNOMO interface (external auxiliary air routing) is located on the same side of the booster valve as connection 1 (supply air) or connection 3 (vent).

Fasten the CNOMO interface using the two hexagon socket head screws (Fig. 8).

Carefully place the red solenoid valve head onto the CNOMO interface. Make sure the two holes in the head are positioned exactly on the seals of the CNOMO interface. If one seal is missing, replace the entire Type 3962 Solenoid Valve. Observe the mounting direction.

Fasten the red solenoid valve head using the two hexagon socket head screws (Fig. 7).

3 Electrical connections

Danger!
Electric shocks and/or the formation of a potentially explosive atmosphere may result in serious injury or death.

For electrical installation, observe the relevant electrotechnical regulations and the accident prevention regulations that apply in the country of use. In Germany, these are the VDE regulations and the accident prevention regulations of the employers' liability insurance.

The following regulations apply to installation in hazardous areas:
EN 60079-14:2003; VDE 0165 Part 1:1998 Electrical Apparatus for Explosive Gas Atmospheres and EN 50281-1-2; VDE 0165 Part 2:1999 Electrical Apparatus for Use in the Presence of Combustible Dust.

Install the connecting cable properly so that it is protected against mechanical damage. If the temperature at the inlet parts exceeds 70 °C, use a temperature-resistant connecting cable. Include the solenoid valve in the on-site equipotential bonding system.

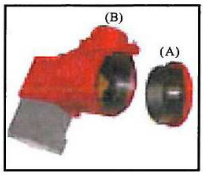
Connection in compliance with type of protection EEx d:

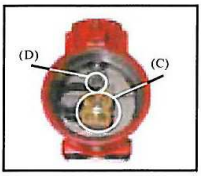
Connect the Type 3962 Solenoid Valve using suitable cable entries or conduit systems that comply with EN 60079-1:2004 Explosive Atmospheres – Part 1: Equipment Protection by Flameproof Enclosures "d", Clauses 13.1 and 13.2, and for which a separate test certificate is available.
Do not use cable entries and blanking plugs of simple construction.
Close unused openings as stipulated in EN 50018:2000, Clause 11.9.

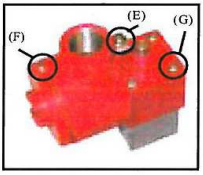
3.1 Cable entries

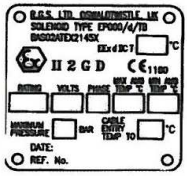
Refer to the mounting and maintenance instructions for the Ex II 2 GD (EEx d IIC T3-6) solenoid on pages 10 and 11.

Installation and Maintenance - Ex II 2 GD (EExd IIC T3-6) Solenoid
Installazione e Manutenzione - Ex II 2 GD (EExd IIC T3-6) Elettrovalvola









(GB)

Installation

The installation of this solenoid should only be undertaken by competent personnel.

1) Remove the M30 termination cover (A)
2) The electrical supply should be fed through the conduit entry (B).
3) Connect electrical supply leads to 2 pole terminal block (C). Note that these terminations may be marked as polarity sensitive, depending on the version supplied. Ensure that correct polarity is connected where marked as the solenoid may be damaged if polarity is reversed.
4) Make earth connections to internal earth point (D) or external earth point (E) as required.
5) On completion of electrical connections, refit the M30 termination cover (A), tighten and secure with locking screw (F).

- Important Note. Both threaded connections to the housing are flame paths and are an integral part of the Ex II 2 G enclosure. Ensure that both are securely tightened before the solenoid is energised.
- Installation should be undertaken in accordance with the requirements of IEC 79-14 and any relevant additional National codes of practice.
- When used in a dust atmosphere the flameproof entries or stopping plugs shall be selected and installed so that the dust tight (IP6X) integrity of the enclosure is maintained.
- If pozi-drive screws (G) are used, a minimum of 1 screw is to be made tamperproof by deformation or application of a locking resin to fill the head recess.
- This unit is suitable for use in hazardous areas up to and including Cat. 2 and is available in various voltages and 'T' Class ratings. Please refer to the RGS Product catalogue for details.

Protection from Hazardous Atmospheres and Other Hazards

- Solenoid enclosure manufactured from epoxy powder paint coated stainless steel.
- This solenoid must not be installed in environments that would react with the apparatus to cause explosions or affect the protection concept.
- This equipment is designed and manufactured to protect against other hazards as defined in paragraph 1.2.7 of Annex II of ATEX Directive 94/9/EC.
- Avoid exposing the equipment to aggressive substances.

Repair / Overhaul

- The solenoid is not designed to be repaired or overhauled in the field. In the event that the unit requires repair it must be returned to RGS.
- Note that repair kits are available for most pneumatic spool valves to which the solenoid valve is attached. The complete solenoid assembly may be removed / refitted to the spool valve without affecting the integrity of the solenoid.

Location

- The solenoid and its mountings are designed to support the self weight of the solenoid assembly. Care should be taken to avoid the unit being exposed to any further loads or mechanical stresses.
- The solenoid is designed to be installed in any orientation.

"T" Class	Max. Surface Temp.
3	200°C
4	135°C
5	100°C
6	85°C

(I)

Installazione

L'installazione della elettrovalvola deve essere eseguita da personale competente.

1) Rimuovere il coperchio (A)
2) Inserire il cavo nel conduit (B)
3) Collegare i terminali di tensione al morsetto (C), in alcuni casi i terminali identificano le polarità, pertanto ove previsto rispettare le polarità durante la connessione elettrica
4) Collegare il cavo di terra al morsetto (D) oppure al morsetto esterno (E)
5) Richiudere il box avvitando il coperchio (A) bloccando per sicurezza la vite (F)

Entrambe le connessioni filettate della custodia o box sono parti integrali della certificazione Ex II 2 G, ed assicurano una perfetta tenuta stagna verso l'esterno.

L'installazione deve essere eseguita in accordo alle Norme IEC 79-14, ed anche alle eventuali Norme previste ed in essere nel Paese dove avviene l'installazione .

Se utilizzato in atmosfera con presenza di polveri il pressacavo o il giunto di bloccaggio deve essere selezionato e installato in modo da mantenere il grado di protezione (IP6X) della custodia.

Se vengono utilizzate viti con testa ad incasso ,almeno una vite deve essere del tipo antimanomissione ottenuta deformando la stessa o applicando resina sigillante che riempia il recesso della vite stessa.

Questa custodia o Box e' adatta per l'impiego in aree pericolose inclusa la Cat. 2, e' disponibile in tutte le tensioni e bifrequenza; l'avvolgimento e' in classe T. Per ulteriori informazioni consultare il catalogo RGS.

Protezione In Ambienti Aggressivi O Con Pericolo Di Esplosione

La custodia o box e' costruita in AISI 304 con verniciatura epossidica.

Il solenoide non deve essere installato in ambienti o luoghi che possono disturbare altri apparati tecnici ed essere fonte di espolosioni o danni di qualsiasi altro genere o natura.

Il componente e' stato progettato e realizzato per impieghi in zone con pericolo di esplosione definite nel paragrafo 1.2.7 ANNEX II della direttiva ATEX 94/9/EC.

Evitare esposizioni del componente ad agenti aggressivi.

Revisione / Riparazione

Il solenoide non e' stato progettato per la sostituzione o riparazione in campo.

In caso di difetti o malfunzionamenti lo stesso deve essere reso a RGS.

Sono invece disponibili Kit di ricambio per ogni tipo di valvola pneumatica abbinata al solenoide.

Il solenoide può essere rimosso sostituito da uno nuovo senza causare problemi di funzionamento alcuno alla valvola pneumatica.

Montaggio

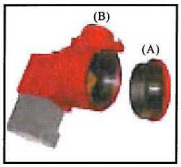
Il solenoide e' stato progettato e costruito per il montaggio in qualsiasi posizione.

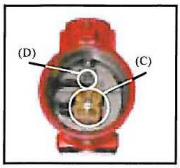
Tutti i componenti che costituiscono il solenoide sono stati progettati e realizzati per garantire la corretta funzionalità dello stesso.

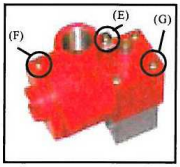
Issue No. 3

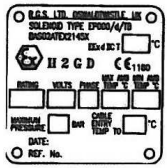
Part Number AV5071

Montage und Wartung des Ex II 2 GD (EExd IIC T3-6) Magneten
Installation et maintenance – Ex II 2 GD (EExd IIC T3-6) Electrovanne









(D)

Montage

Montage dieses Magneten bitte nur durch Fachpersonal.
1) M30 Anschlußkappe (A) entfernen.
2) Elektrische Leitung durch Rohreingang (B) führen.
3) Elektrische Leitungsenden mit zweipoligem Anschlußblock (C) verbinden. Beachten, daß diese Anschlüsse als polaritätsempfindlich markiert sein können, je nach dem, welcher Typ geliefert wurde. Sicherstellen, daß – wo markiert - korrekte Polarität verbunden wird, da der Magnet bei falscher Polarität beschädigt werden kann.
4) Erdverbindungen wie benötigt mit internem Erdpunkt (D) oder externen Erdpunkt (E) herstellen.
5) Nach Beendigung der elektrischen Anschlüsse wieder M30 Anschlußkappe (A) montieren und Sicherungsschraube (F) anziehen.
Wichtig: Beide Gewindeverbindungen an das Gehäuse sind Flammenwege und ein integrales Teil des Ex II 2 G Gehäuses. Sicherstellen, daß beide sicher angezogen sind bevor der Magnet erregt wird.
Montage sollte in Übereinstimmung mit IEC 79-14 vorgenommen werden sowie etwaigen relevanten nationalen Vorschriften.
Dieses Gerät ist geeignet für den Einsatz in Gefahrgebieten bis und einschließlich Cat. 2 und in zahlreichen Spannungen und T-Klassen verfügbar. Weitere Einzelheiten im RGS Katalog.

Schutz vor gefährlichen Atmosphären und anderen Gefahren

Magnetgehäuse hergestellt aus rostfreiem Stahl mit Epoxyd-Deckschicht. Dieser Magnet darf nicht in Umgebungen installiert werden, die mit dem Apparatesatz reagieren und Explosionen verursachen oder das Schutzkonzept beeinflussen.
Dieses Gerät wurde entwickelt und hergestellt, um gegen andere Gefahren, wie in Paragraph 1.2.7 Anhang II der ATEX-Anweisung 94/9/EC festgelegt, zu schützen.
Das Gerät nicht aggressiven Substanzen aussetzen.

Reparatur/Überholung

Der Magnet ist nicht geeignet für die Reparatur oder Überholung im Feld. Zur Reparatur muß das Gerät an RGS zurückgeschickt werden.
Für die meisten Pneumatik-Spindelventile, an die das Magnetventil montiert ist, sind Reparatur-Bausätze verfügbar. Der komplete Magnet-Apparatesatz kann vom Spindelventil abgebaut bzw. wieder an das Spindelventil montiert werden, ohne Beeinträchtigung des Magneten.

Lage

Der Magnet und seine Befestigungsschrauben sind so konstruiert, daß sie das Eigengewicht des Magnet-Apparatesatzes halten. Das Gerät sollte keiner weiteren Last oder mechanischer Spannung ausgesetzt werden.
Der Magnet kann in jeder Ausrichtung installiert werden.

"T" Class	Max. Surface Temp.
3	200°C
4	135°C
5	100°C
6	85°C

(F)

Installation

L'installation de cette electrovanne ne doit etre effectuee que par du personel agremente et competent.
1) Enlever le couvercle du bornier M30 (A).
2) L'alimentation electrique doit etre faite par l'entrée de conduit (B).
3) Connecter les 2 fils de l'alimentation electrique au bornier (C). Noter que les terminaux du bornier peuvent etre marques avec polarite, dependant du modele. Si c'est le cas, assurez-vous que la polarite est respectee. L'electrovanne peut etre endommagee si la polarite neccessaire est inversee.
4) Connecter le fil de terre au point de terre interne (D) ou externe (E) comme requis.
5) Apres avoir fini les connections electrique, remettre en place le couvercle du bornier M30 (A), bien visser et serrer les vis de securite (F).
Note importante: Les deux pas de vis du boitier sont des passages de flammes et font partie inherente de l'assemblage Ex II2 G. Il faut s'assurer que les deux parties soient proprement vissees avant de brancher l'electrovanne.
L'installation doit etre entreprise en suivant les directives de IEC 79-14 et toute autre directive en application dans les codes nationaux.
Cette unite peut etre utilisee en zone dangereuse jusqu'a Zone 1 inclus et est disponible en different voltages et classifications "T". Veuillez vous referer au catalogue des produits RGS pour details supplementaires.

Protection contre atmospheres dangereuses ou autre dangers

Le corps d'electrovanne est fabrique en acier inoxydable revetu de peinture epoxy-poudre.
Cette electrovanne ne doit pas etre installee dans un environment qui pourrait reagir avec cette appareillage et causer une explosion ou affecter le niveau de protection.
Cet appareillage a ete planifie et fabrique pour la protection contre d'autre dangers definis dans le paragraphe 1.2.7 / Annexe II de la directive ATEX 94/9/EC.
Eviter le contact de cet appareillage avec toute substance corrosive ou aggressive.

Reparations / Remises a neuf

Cette electrovanne n'est pas designee pour etre reparee ou remise a neuf sur site. Dans le cas ou cette piece aurai besoin d'etre reparee, elle doit etre renvoyee a RGS.
Noter que des kits de reparations sont disponibles pour la pluparts des manifold des vannes pneumatiques sur lesquelles cette electrovanne peut etre fixee. L'assemblage complete (qui inclu la base sur laquelle cette electrovanne est montee) peut etre demonte/remonte sans affecter l'integrite de cette electrovanne.

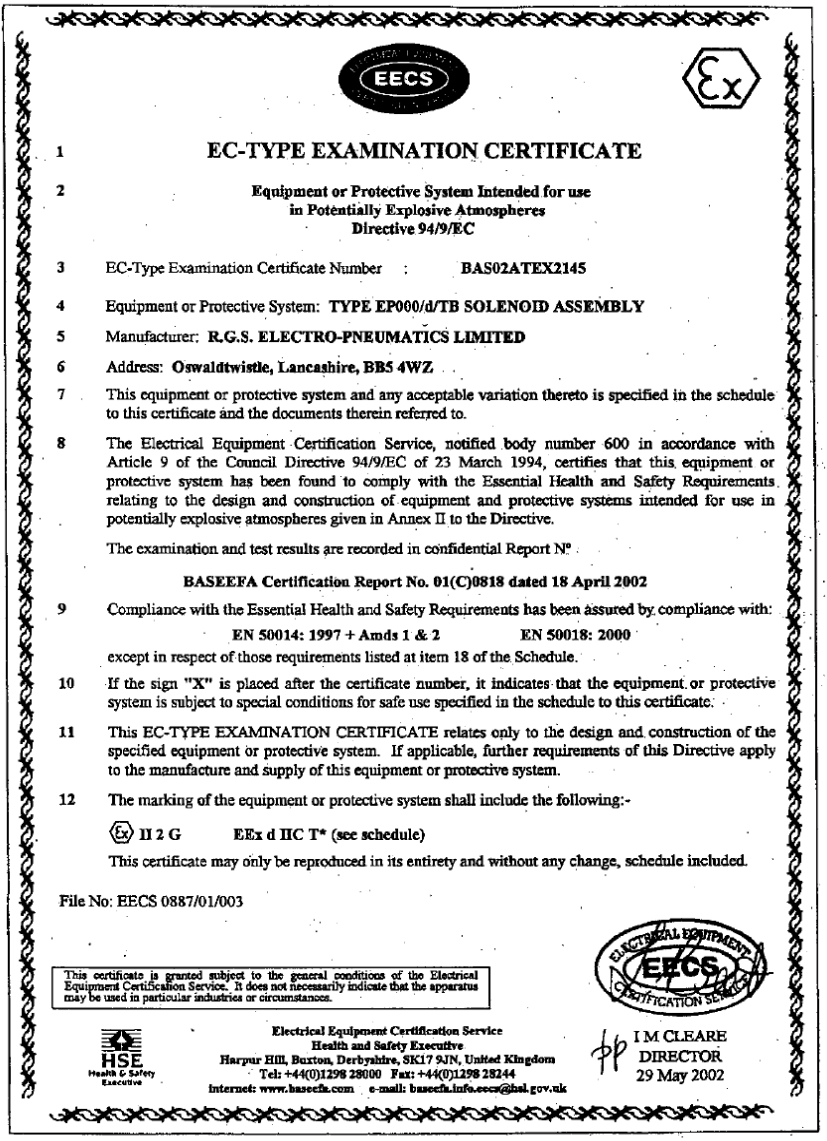
Location

Cette electrovanne et ses pieces de montages sont capables de supporter son propre poid et celui de la vanne pneumatique. Il faut faire attention a ne pas exposer ce montage a un poid ou stress mechanique suplementaire.
Cette electrovanne peut etre montee dans nimporte quelle direction.

R.G.S. Electro - Pneumatics Ltd.,
West End Business Park, Blackburn Road
Oswaldtwistle, Lancs., BB5 4WZ. England.

Tel. +44 (0)1254 872277
Fax. +44 (0)1254 390133
e-mail : sales@rgs-e-p.co.uk

4 Certificates



1 **EC-TYPE EXAMINATION CERTIFICATE**

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC**

3 EC-Type Examination Certificate Number : **BAS02ATEX2145**

4 Equipment or Protective System: **TYPE EP000/d/TB SOLENOID ASSEMBLY**

5 Manufacturer: **R.G.S. ELECTRO-PNEUMATICS LIMITED**

6 Address: **Oswaldtwistle, Lancashire, BB5 4WZ**

7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 The Electrical Equipment Certification Service, notified body number 600 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential Report N°

BASEEFA Certification Report No. 01(C)0818 dated 18 April 2002

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 50014: 1997 + Amds 1 & 2 **EN 50018: 2000**

except in respect of those requirements listed at item 18 of the Schedule.

10 If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EC-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protective system. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment or protective system.

12 The marking of the equipment or protective system shall include the following:-

Ex **II 2 G** **EEx d IIC T* (see schedule)**

This certificate may only be reproduced in its entirety and without any change, schedule included.

File No: EECS 0887/01/003

This certificate is granted subject to the general conditions of the Electrical Equipment Certification Service. It does not necessarily indicate that the apparatus may be used in particular industries or circumstances.

HSE Health & Safety Executive

Electrical Equipment Certification Service
Health and Safety Executive
Harpur Hill, Buxton, Derbyshire, SK17 9JN, United Kingdom
Tel: +44(0)1298 28000 Fax: +44(0)1298 28244
Internet: www.baseefa.com e-mail: baseefa.info.eecs@hsl.gov.uk

pp I M CLEARE
DIRECTOR
29 May 2002

CERT\ATEX\EQUIP\CAT1-2\P, Issue 1, Dated September 1998

Page 1/3

EECS

13 **Schedule**

14 **EC-TYPE EXAMINATION CERTIFICATE N° BAS02ATEX2145**

15 **Description of Equipment or Protective System**

The Type EP000/d/TB Solenoid Assembly comprises a cast stainless steel housing with an integral terminal enclosure and a threaded cover, all manufactured from Grade ANC1B stainless steel to BS 3164 1975. The enclosure contains a coil rated up to 3W (d.c.) or 9.5VA (a.c.) retained by a threaded end cap which also positions and retains a centre tube which locates the pole piece and armature. Alternative coils may be fitted for 12 to 440V a.c.50/60 Hz or 6 to 240V d.c. supplies. A two way terminal block is fitted within the terminal compartment and a bridge rectifier may added in order that the 3W d.c. coil may be operated from an a.c. or d.c. supply if required.

Internal and external earthing facilities are provided.

The Temperature Classifications and maximum ambient temperatures for each coil type are listed below:

Temperature Classification	Supply	Coil Rating (max)	Ambient Temperature	Cable Temperature
T6	d.c.	3W	-60°C to +40°C	-
T5	d.c.	3W	-60°C to +55°C	-
T4	d.c.	3W	-60°C to +65°C	85°C
T4	d.c.	3W	-60°C to +80°C	105°C
T5	a.c./d.c. (internal rectifier)	3W	-60°C to +55°C	-
T4	a.c.	9.5VA	-60°C to +40°C	90°C
T3	a.c.	9.5VA	-60°C to +55°C	105°C

A cable entry hole is provided as specified on the certified drawings for the accommodation of suitable BASEEFA certified flameproof cable entry devices, with or without the interposition of a suitable BASEEFA certified flameproof thread adapter. Unused entries are to be fitted with suitable BASEEFA certified flameproof stopping plugs.

Suitable flameproof cable entry devices, thread adapters and stopping plugs certified as Equipment (not a Component) under an EC Type Examination Certificate to Directive 94/9/EC may also be used in the manner specified above.

16 **Report No.**

BASEEFA Certification Report No. 01(CD)0818

17 **Special Conditions For Safe Use**

None.

Page 2/3

13 **Schedule**

14 **EC-TYPE EXAMINATION CERTIFICATE N° BAS02ATEX2145**

18 **Essential Health and Safety Requirements**

None that are not covered by assessment against the standard listed at 9.

19 **DRAWINGS**

Number	Issue	Date	Description
CV5002	1	19/03/02	General Arrangement, Type EP000/d/TB Solenoid Assembly

This certificate may only be reproduced in its entirety and without any change, schedule included.

BASEEFA List Keywords
2SOLENOI

Page 3/3

SAMSOMATIC GmbH
Weismüllerstraße 20-22 D - 60314 Frankfurt am Main
Telefon: 069 4009-0 · Telefax: 069 4009-1644
Internet: http://www.samsomatic.de

EB 3962 EN

S/Z 2009-01